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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|------------------------|------------------|
| 10/767,380 | 01/28/2004 | Ashwin J. Mathew | 03226.443001;SUN030034 | 4747 |

32615 7590 06/04/2007
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| EXAMINER |
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KIM, PAUL

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| ART UNIT | PAPER NUMBER |
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2161

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| MAIL DATE | DELIVERY MODE |
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06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/767,380

Applicant(s)

MATHEW ET AL.

Examiner

Paul Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 32-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 32-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>3/15/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Office Action is responsive to the following communication: Amendment filed on 15 March 2007.
2. Claims 1-19 and 32-42 are pending and present for examination. Claims 20-31 are Non-elected.

Response to Amendment

3. Claims 1, 10, 11, and 18-19 have been amended.
4. Claims 32-42 have been added.
5. No claims have been cancelled.

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on 15 March 2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

7. **As per claims 10, 11 and 18-19**, Applicant's Amendment is acknowledged. Accordingly, the rejections directed to claim 10, 11 and 18-19 have been withdrawn.

Claim Rejections - 35 USC § 101

8. **As per claim 1**, Applicant's Amendment is acknowledged. Accordingly, the rejections directed to claim 10, 11 and 19 have been withdrawn.

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. **Claims 1, 3-10, 12, 14, 16-18, 32, 34, and 36-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingham (USPGPUB 2003/0120672, hereinafter referred to as BINGHAM), filed on 20 December 2002, and published on 26 June 2003, in view of Ng et al (NPL Document, "PeerDB: A P2P-based System for Distributed Data Sharing," hereinafter referred to as NG), published in 2003 by the 19th International Conference of Data Engineering.

BINGHAM and NG disclose the limitations of claims 1, 3, 5-10, 12, 14 and 16-18 for the reasons stated below.

BINGHAM differs from the claimed invention in that BINGHAM fails to expressly disclose a method wherein a join engine peer accesses a global attribute object model for identifying a dependent output entity and wherein the modified attribute set is then published to an output source system associated with an output entity (claims 1 and 12).

11. **As per independent claims 1, 12 and 32**, BINGHAM, in combination with NG, discloses:

An automated method of updating data within a peer-to-peer enterprise information system comprising:

publishing a data change for a source data type over a broadcast channel of said peer-to-peer enterprise information system {See BINGHAM, [0012], wherein this reads over "[t]o ensure that a hosting node is timely notified of any change to the content objects . . . any change to one of the content objects triggers an event to publish the changed content object"};

in response to said data change a join engine peer accessing a global attribute object model for identifying a dependent output entity {See NG, P636:C1, wherein this reads over "DBAgent provides the environment for mobile agents to operate on. Each PeerDB node has a master agent that manages the query of the user. In particular, it will clone and dispatch worker agents to neighboring nodes, receive answers and present them to the user"}, said output entity comprising a same attribute of said data change {See BINGHAM, [0060], wherein this reads over "the content object is considered as or includes an API object that has different attributes for synchronization associated with it. Only when the other nodes have their shared instance of this content object called upon do they then synchronize the information associated with the object"},

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and for identifying additional attributes for forming a modified attribute set {See BINGHAM, [0059], wherein this reads over "[b]ased upon a pre-defined set of attributes, the synchronization could take place in different mechanisms"; and [0060], wherein this reads over "[o]nly when the other nodes have their shared instance of this content object called upon do they then synchronize the information associated with this object"};

generating a query directed to a source system comprising said additional attributes for forming said modified attribute set {See BINGHAM, [0059], wherein this reads over "[b]ased upon a pre-defined set of attributes, the synchronization could take place in different mechanisms"; and [0060], wherein this reads over "[o]nly when the other nodes have their shared instance of this content object called upon do they then synchronize the information associated with this object"}; and

responsive to a reply from said source system, said join engine peer automatically forming said modified attribute set and publishing said modified attribute set to an output source system associated with said output entity {See NG, P639:C1, wherein this reads over "[i]f the retrieved data need to be further processed before being returned, then the agent will perform the task (with the code that it carries along) and return the summarized data"}.

While NG does not expressly disclose a method wherein a data change is published over a broadcast channel, BINGHAM discloses a method wherein changes to one of the content objects triggers an event to publish the changed content object to other nodes. The disclosures found in both BINGHAM and NG are directed to the sharing of data in a peer-to-peer based environment. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by BINGHAM and NG.

One of ordinary skill in the art would have been motivated to do this modification so that a data may be consolidated and synchronized from various related sources in a peer-to-peer enterprise information system by broadcasting data changes, and having respective join engines generating queries to retrieve attributes to form a modified attributes set.

12. As per dependent claims 3, 14 and 34, BINGHAM, in combination with NG, discloses:

A method as described in Claim 1 wherein said published data change includes at least one changed attribute and all other attributes of said source data type {See BINGHAM, [0012], wherein this reads over "[t]o ensure that a hosting node is timely notified of any change to the content objects . . . any change to one of the content objects triggers an event to publish the changed content object to the hosting node and the hosting node is thus always synchronized with its nodes providing the content sources"}.

13. As per dependent claims 5, 16 and 36, BINGHAM, in combination with NG, discloses:

A method as described in Claim 1 wherein said global attribute object model maps dependencies between output entity attributes and source entity attributes {See

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BINGHAM, [0060], wherein this reads over "the content object is considered as or includes an API object that has different attributes for synchronization associated with it. Only when the other nodes have their shared instance of this content object called upon do they then synchronize the information associated with the object"}.

14. **As per dependent claims 6 and 37**, it would inherent for the method of forming a modified attribute set to comprise performing a data transformation since the creation or modification of the modified attribute set would necessitate in the transformation of data.

15. **As per dependent claims 7 and 38**, it would inherent for the method of forming a modified attribute set to further comprise performing a data transformation for the published data change since the insertion of the published data change into the modified attribute set would necessitate in the transformation of data.

16. **As per dependent claims 8 and 39**, BINGHAM, in combination with NG, discloses:

A method as described in Claim 7 wherein said performing a data transformation is by said join engine peer {See BINGHAM, [0012], wherein this reads over "[t]o ensure that a hosting node is timely notified of any change to the content objects . . . any change to one of the content objects triggers an event to publish the changed content object to the hosting node and the hosting node is thus always synchronized with its nodes providing the content sources"}.

17. **As per dependent claims 9, 17 and 40**, BINGHAM, in combination with NG, discloses:

A method as described in Claim 8 wherein said performing a data transformation comprises automatically transforming said data change into a transformation script of a transformation language for implementation by said join engine peer {See BINGHAM, [0064], wherein this reads over "the HTML pages can be potentially re-purposed for various devices, such as a PDA, a portable computer, or another language on another personal computer"}.

18. **As per dependent claims 10, 18 and 41**, BINGHAM, in combination with NG, discloses:

A method as described in Claim 9 wherein said transformation language is compliant with XSLT syntax {See BINGHAM, [0063], wherein this reads over "[b]oth the XSLT style sheet and the XML document are included in one or more content objects, wherein the content objects can represent . . . APIs to another application that will provide specific information when called upon"}.

19. **Claims 2, 4, 10-11, 13, 15, 19, 33, 35, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over BINGHAM, in view of NG, as applied to claims 1, 3-10, 12, 14, 16-18 above, and in further view of Applicant Admitted Prior Art.

20. **As per dependent claims 2, 13 and 33**, it would have been obvious to one of ordinary skill in the art for the broadcast channel to be associated with an adapter peer for a source system for the

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source data type since it would be necessary to utilize the broadcast channel in effectively publishing the data change in the peer-to-peer enterprise information system.

21. **As per dependent claims 4, 15 and 35**, it would have been obvious to one of ordinary skill in the art to form the modified attribute set directly from the published data change when all the additional attributes are contained within the source data type since there would be no need to further access other sources for additional attributes.

22. **As per dependent claims 10, 11, 19 and 42**, it would have been obvious to one of ordinary skill in the art to use transformation language which is compliant with XSLT and JAVA language syntax since both syntaxes would have been widely known within the art at the time the invention was made.

Response to Arguments

23. Applicant's arguments filed 15 March 2007 have been fully considered but they are not persuasive.

a. Rejections under 35 U.S.C. 103(a)

Applicant asserts the argument that "NG cannot possibly disclose the use of a global object model for identifying a dependent output entity as recited in amended independent claims 1 and 12." Amendment, page 8. The Examiner respectfully disagrees. It is noted that NG discloses a system wherein "[f]or each relation that is created, the associated metadata (schema, keywords, etc) are stored in a Local Dictionary. There is also an Export Dictionary that reflects the meta-data of objects that are sharable to other nodes." NG, page 636, subsection 4.1. Accordingly, wherein the associated metadata is shared among nodes, and said metadata maintained for each relation name and attributes, NG would indeed disclose the use of a global object model (i.e. the Local Dictionary and associated metadata) for identifying a dependent output entity (i.e. each relation name and attributes).

Additionally, Applicant asserts the argument that "there is no motivation whatsoever for one of ordinary skill in the art to combine the teachings of Bingham with the teachings of NG."

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Amendment, page 9. The Examiner respectfully disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the system disclosed by NG utilizes an Export Dictionary to define sharable metadata with other nodes such that the metadata may be used in a relation-matching strategy. Said use of a relation-matching strategy does not teach away from the invention as disclosed by Bingham in that the relation-matching strategy simply facilitates the use of a schema subset in sharing data among the nodes.

Lastly, Applicant requests that "the Examiner provide an affidavit of personal knowledge, pursuant to 37 C.F.R. 1.104(d)(2)" regarding the Official Notice. Applicant asserts the argument that the Examiner's Official Notice is deficient in that the Examiner has not provided documentary evidence of proof for the Official Notice. The Examiner notes that the features claimed are well-known within the art. Because Applicant has inadequately traversed the Official Notice and is therefore deficient, no document evidence shall be provided by the Examiner. The Applicant is directed to MPEP 2144.03, which address the topic of Official Notice and clearly state the criteria for traversing an Official Notice. MPEP 2144.03, Part C states the following in part:

To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. See 37 CFR 1.111(b). See also *Chevenard*, 139 F.2d at 713, 60 USPQ at 241 ("[I]n the absence of any demand by appellant for the examiner to produce authority for his statement, we will not consider this contention."). A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate. (emphasis added)

If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. (emphasis added).

Accordingly, because of Applicant's inadequate traversal, it is noted that the rejections of

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claims 2, 4, 10-11, 13, 15 and 19 have been modified to indicate that the limitations of the claim, which are well-known in the art, are to be taken as admitted prior art.

Therefore, for the aforementioned reasons above, the claims rejections under 35 U.S.C. 103(a) are sustained.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

Elk If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *APU Mofiz* *Elk 4080* ~~Jeffrey Gaffin~~ can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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